



# AKERMAN SENTERFITT

ATTORNEYS AT LAW

222 LAKEVIEW AVENUE, SUITE 400  
WEST PALM BEACH, FLORIDA 33401  
PHONE (561) 653-5000 • FAX (561) 659-6313  
<http://www.akerman.com>

BARBARA S. KITCHELL  
561.671.3665

March 21, 2002

Commissioner of Patents and Trademarks  
Washington, DC 20231

Re: U.S. Patent Application Serial Number 09/936,809 based on PCT/US00/07243, in  
the name of The University of Tennessee Research Corporation for MAKING AND  
USING MICROCLONAL UNCLONED cDNA LIBRARIES by Oleg N. Suslov, Dennis  
A. Steindler and Valery G. Kukekov  
Our ref: 6704-13US  
Client ref: PD 98052

Sir:

Enclosed for filing in the above referenced patent application is an Information  
Disclosure Statement, PTO Form 1449 listing references A1-12; B1-2; C1-C66 and  
copies of these references.

No fees are believed to be due in connection with the filing of this Information  
Disclosure Statement; however, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be  
deemed necessary for any reason relating to the enclosed materials, the Commissioner is  
hereby authorized to deduct said fees from Akerman Senterfitt Deposit Account No. 50-  
0951.

Please date, stamp and return the enclosed postcard evidencing receipt of these materials.

Respectfully submitted,

Barbara S. Kittell  
Reg. No. 33,928

Enclosures: Form 1449  
References A1-12; B1-2; C1-C66  
Postcard

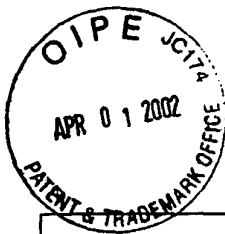
1645  
RECEIVED

APR 05 2002

TECH CENTER 1600/2900

Commissioner of Patents and Trademarks  
March 21, 2002  
Page 2

bcc: Ann J. Roberson, Esq. (w/o copies of refs.)  
Mr. Robert L. Palmer (w/o copies of refs.)  
Dr. Dennis Steindler (w/o copies of refs.) to distribute to:  
Dr. Oleg N. Suslov (w/o copies of refs.)  
Dr. Valery G. Kukekov (w/o copies of refs.)



RECEIVED

APR 05 2002

TECH CENTER 1600/2900

CERTIFICATE OF MAILING  
37 CFR 1.8 (a)

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class mail in an envelope addressed to Commissioner for Patents, Washington, D.C. 20231 on March 21, 2002.

*Sandra M. Campbell*  
Sandra M. Campbell

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Oleg N. Suslov  
Dennis A. Steindler  
Valery G. Kukekov

Group Art Unit: 1645

Examiner:

Atty: Dkt. No.: 6704-13US

Serial No.: 09/936,809  
Filed: 01/16/02

For: MAKING AND USING  
MICROCLONAL UNCLONED CDNA LIBRARIES

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

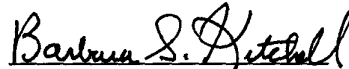
In compliance with the duty of disclosure under 37 C.F.R. § 1.56, it is respectfully requested that this Information Disclosure statements be entered and the documents listed on attached Form PTO-1449 be considered by the Examiner and made of record. Copies of the listed documents required by 37 C.F.R. § 1.98(a)(2) are enclosed for the convenience of the Examiner.

In accordance with 37 C.R.F. §§ 1.97(g), (h), this Information Disclosure Statement is not to be construed as a representation that a search has been made, and is not to be construed to be an admission that the information cited is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b).

The present Information Disclosure Statement is being filed prior to the receipt of a first Official Action reflecting an examination on the merits and hence is believed to be timely filed in accordance with 37 C.F.R. §1.97(b). No fees are believed to be due in connection with the filing of this Information Disclosure Statement, however, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be deemed necessary for any reason relating to these materials, the Commissioner is hereby authorized to deduct said fees from Akerman Senterfitt, Deposit Account No. 50-0951.

Applicants respectfully request that the listed documents be made of record in the present case.

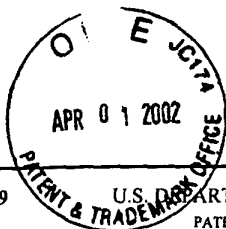
Respectfully submitted,



Barbara S. Kitchell  
Reg. No. 33,928  
Attorney for Applicants

AKERMAN SENTERFITT  
222 Lakeview Avenue, Suite 400  
West Palm Beach, FL 33401  
(561) 653-5123

Dated: March 21, 2002

Form PTO-1449  
(REV. 2-88)**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
(Use several sheets if necessary)U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO: 6704-13US /BSK

SERIAL NO.: 09/936,809

APPLICANT: Oleg N. Suslov, Dennis a. Steindler and Valery G.  
Kukekov

FILING DATE: 01-16-02

GROUP: 1645

**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	REF. DES.	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	A1		11/19/85	Hopp.			
	A2		07/28/87	Mullis, et al.			
	A3		07/28/87	Mullis			
	A4		10/10/89	Kunkel			
	A5		10/23/90	Mullis, et al.			
	A6		01/05/93	Sninsky, et al.			
	A7		03/11/97	Rubenstein			
	A8		02/17/98	Considine, et al.			
	A9		04/14/98	Galli, et al.			
	A10		06/02/98	Shewmaker, et al.			
	A11		08/04/98	Baker, et al.			
	A12		09/01/98	Baracchini, et al.			

**FOREIGN PATENT DOCUMENTS**

Exam. Init.	Ref. Des.	Document Number	Date	Country	Class	Sub Class	Translation Yes/No
	B1	EP 75,444	03/30/83	Europe			
	B2	WO99/ 11758	03/11/99	PCT			

**OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)**

	C1	Adams <i>et al.</i> , "Rapid cDNA sequencing (expressed sequence tags) from a directionally cloned human infant brain cDNA library," <i>Nat. Genet.</i> , 4:373-380, 1993.
	C2	Allen, "The Cessation of Mitosis in the Central Nervous System of the Alino Rat," <i>J. Comp. Neurol.</i> , 22:547-568, 1912.

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449  
(Rev. 2-88)U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

APPLICATION NO.

6704-13US

09/936,809

APPLICANT

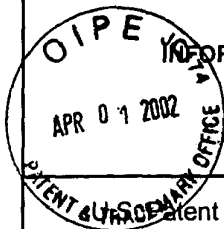
Oleg N. Suslov, Dennis A. Steindler and  
Valery G. Kukekov

FILING DATE

01-16-02

GROUP

1645

INFORMATION DISCLOSURE STATEMENT  
BY APPLICANTPatent Documents  
See Page 1Foreign Patent Documents  
See Page 1Other Art  
See Page 1-6

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C3	Altman, "Autoradiographic and histological studies of postnatal neurogenesis," <i>J. Comp. Neurol.</i> , 136(3):269-293, 1969.
	C4	Altman, "Autoradiographic and histological studies of postnatal neurogenesis," <i>J. Comp. Neurol.</i> , 137(4):433-457, 1969.
	C5	Altschul <i>et al.</i> , "Basic local alignment search tool," <i>J. Mol. Biol.</i> , 215:403-410, 1990.
	C6	Arsenijevic and Weiss, "Insulin-like growth factor-I is a differentiation factor for postmitotic CNS stem cell-derived neuronal precursors: distinct actions from those of brain-derived neurotrophic factor," <i>J. Neurosci.</i> , 18(6):2118-2128, 1998.
	C7	Bjornson <i>et al.</i> , "Turning brain into blood: a hematopoietic fate adopted by adult neural stem cells in vivo," <i>Science</i> , 283:534-537, January 22, 1999.
	C8	Calof <i>et al.</i> , "The neuronal stem cell of the olfactory epithelium," <i>J. Neurobiol.</i> , 36:190-205, 1998.
	C9	Chang and Hemmati-Brivanlou, "Cell fate determination in embryonic ectoderm," <i>J. Neurobiol.</i> , 36:128-151, 1998.
	C10	Chen <i>et al.</i> , "Profiling expression patterns and isolating differentially expressed genes by cDNA microarray system with colorimetry detection," <i>Genomics</i> , 51:313-324, 1998.
	C11	Corpet, "Multiple sequence alignment with hierarchical clustering," <i>Nucleic Acids Res.</i> , 16:(22)10881-10890, 1988.
	C12	Diatchenko <i>et al.</i> , "Suppression subtractive hybridization: A method for generating differentially regulated or tissue-specific cDNA probes and libraries," <i>Proc. Natl. Acad. Sci. USA</i> , 93:6025-6030, 1996.
	C13	Doe, Fuerstenberg and Peng, "Neural stem cells: from fly to vertebrates," <i>J. Neurobiol.</i> , 36:111-127, 1998.
	C14	Eberwine <i>et al.</i> , "Analysis of gene expression in single live neurons," <i>Proc. Nat'l Acad. Sci USA</i> , 89:3010-3014, 1992.
	C15	Eisen <i>et al.</i> , "Cluster analysis and display of genome-wide expression patterns," <i>Proc. Natl. Acad. Sci. USA</i> , 95(25):14863-14868, 1998.
	C16	Eriksson <i>et al.</i> , "Neurogenesis in the adult human hippocampus," <i>Nat. Med.</i> , 4(11):1313-1317, November 1998.

EXAMINER:

DATE CONSIDERED:

EXAMINER: INITIAL IF A CITATION CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH  
MPEP 609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED. INCLUDE COPY  
OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

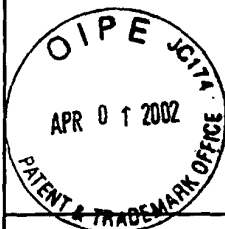
WP081641;1

APR 05 2002

RECEIVED

TECH CENTER 1000/2900

Form PTO-1449

U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark OfficeINFORMATION DISCLOSURE STATEMENT  
BY APPLICANTATTORNEY DOCKET NO:

6704-13US / BSK

APPLICATION NO:

09/936,809

APPLICANT:Oleg N. Suslov, Dennis A.  
Steindler and Valery G.  
KukekovFILING DATE:

01-16-02

GROUP:

1645

U.S. Patent Documents  
See Page 1Foreign Patent Documents  
See Page 1Other Art  
See Page 1

OTHER ART (Including Author, Title, Date Pertinent Pages, Etc.)

C17	Ferguson, "A fiber-optic DNA biosensor microarray for the analysis of gene expression," <i>Nat. Biotech.</i> , 14:1681-1684, December 1996.
C18	Gritti <i>et al.</i> , "Multipotential stem cells from the adult mouse brain proliferate and self-renew in response to basic fibroblast growth factor," <i>J. Neurosci.</i> , 16:1091-1100, February 1, 1996.
C19	Herington, "Effect of disulfide-bond reducing agents on the specific binding of growth hormone to microsomal membrane preparations from rabbit liver," <i>Biochem. Pharmacol.</i> , 35(8):1359-1364, 1986.
C20	Higgins <i>et al.</i> , "Clustal: a package for performing multiple sequence alignment on a microcomputer," <i>Gene</i> , 73:237-244, 1988.
C21	Higgins <i>et al.</i> , "Fast and sensitive multiple sequence alignments on a microcomputer," <i>CABIOS</i> , 5(2):151-153, 1989.
C22	Huang <i>et al.</i> , "Parallelization of a local similarity algorithm," <i>CABIOS</i> , 8(2):155-165, 1992.
C23	Hubank and Schatz, "Identifying differences in mRNA expression by representational difference analysis of cDNA," <i>Nucleic Acids Res.</i> , 22(25):5640-5648, 1994.
C24	Jacobson: <i>Developmental Neurobiology</i> , 3 <sup>rd</sup> Edition, Plenum Press, NY, 1978.
C25	Johansson <i>et al.</i> , "Identification of a neural stem cell in the adult mammalian central nervous system," <i>Cell</i> , 96, 25-34, January 8, 1999.
C26	Keller and Snodgrass, "Human embryonic stem cells: The future is now," <i>Nat. Med.</i> , 5(2):151-152, February 1999.
C27	Klebe <i>et al.</i> , "RT-PCR without RNA isolation," <i>Biotechniques</i> , 21(6): 1094-1100, 1996.
C28	Kukekov <i>et al.</i> , "Multipotent stem/progenitor cells with similar properties arise from two neurogenic regions of adult human brain," <i>Exp. Neurol.</i> , 156:333-344, 1999.
C29	Kukekov <i>et al.</i> , "A nestin-negative precursor cell from the adult mouse brain gives rise to neurons and glia," <i>GLIA</i> , 21:399-407, 1997.

EXAMINER:

DATE CONSIDERED:

EXAMINER: INITIAL IF A CITATION CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH  
MPEP 609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED. INCLUDE COPY  
OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

Form PTO-1449

U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark OfficeINFORMATION DISCLOSURE STATEMENT  
BY APPLICANTATTORNEY DOCKET NO:

6704-13US / BSK

APPLICATION NO:

09/936,809

APPLICANT:Oleg N. Suslov, Dennis A.  
Steindler and Valery G.  
KukekovFILING DATE:

01-16-02

GROUP:

1645

U.S. Patent Documents  
See Page 1Foreign Patent Documents  
See Page 1Other Art  
See Page 1

OTHER ART (Including Author, Title, Date Pertinent Pages, Etc.)

C30	Kunkel <i>et al.</i> , "Rapid and efficient site-specific mutagenesis without phenotypic selection," <i>Methods Enzymol.</i> , 154:367-382, 1987.
C31	Kunkel, "Rapid and efficient site-specific mutagenesis without phenotypic selection," <i>Proc Natl. Acad. Sci. USA</i> , 82:488-492, January 1985.
C32	Kyte and Doolittle, "A simple method for displaying the hydropathic character of a protein," <i>J. Mol. Biol.</i> , 157. 105-132, 1982.
C33	Laywell, Kukekov and Steindler, "Multipotent neurospheres can be derived from forebrain subependymal zone and spinal code of adult mice after protracted postmoretem intervals," <i>Exp. Neurol.</i> , 156(2):430-433, 1999.
C34	Levitt <i>et al.</i> , "Coexistence of neuronal and glial precursor cells in the cerebral ventricular zone of the fetal monkey: an ultrastructural immunoperoxidase analysis," <i>et al.</i> , <i>J. Neuroscience</i> , 27-39, January 1981.
C35	Lin <i>et al.</i> , "Re-expression of the intermediate filament nestin in reactive astrocytes," <i>Neurobiol. Dis.</i> , 2:79-85, 1995.
C36	Ling and Neben, "In vitro differentiation of embryonic stem cells: immunophenotypic analysis of cultured embryoid bodies," <i>J. Cell Physiol.</i> , 171:104-115, 1997.
C37	Lisitsyn <i>et al.</i> , "Cloning the differences between two complex genomes," <i>Science</i> , 259:946-951, February 12, 1993.
C38	Mayer-Proschel <i>et al.</i> , "Isolation of lineage-restricted neuronal precursors from multipotent neuroepithelial stem cells," <i>Neuron</i> , 19:773-785, October 1997.
C39	McKay, "Stem cells in the central nervous system," <i>Science</i> , 276:66-71, April 4 1997.
C40	Needleman <i>et al.</i> , "A general method applicable to the search for similarities in the amino acid sequence of two proteins," <i>J. Mol. Biol.</i> , 48:443-453, 1970.
C41	Pearson <i>et al.</i> , "Improved tools for biological sequence comparison," <i>Proc. Natl. Acad. Sci. USA</i> , 85:2444-2448, April 1988.
C42	Pearson, "Using the FASTA program to search protein and DNA sequence databases," <i>Methods in Molecular Biology</i> , 24:307-331, 1994.

EXAMINER:

DATE CONSIDERED:

EXAMINER: INITIAL IF A CITATION CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH  
MPEP 609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED. INCLUDE COPY  
OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

TECH CENTER 1600/2900

APR 05 2002



<b>Form PTO-1449</b> U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office  <b>INFORMATION DISCLOSURE STATEMENT          BY APPLICANT</b>		<b>ATTORNEY DOCKET NO:</b> 6704-13US / BSK <b>APPLICATION NO:</b> 09/936,809 <b>APPLICANT:</b> Oleg N. Suslov, Dennis A. Steindler and Valery G. Kukekov <b>FILING DATE:</b> 01-16-02 <b>GROUP:</b> 1645
U.S. Patent Documents See Page 1	Foreign Patent Documents See Page 1	Other Art See Page 1
<b>OTHER ART (Including Author, Title, Date Pertinent Pages, Etc.)</b>		

C43	Polymeropoulos <i>et al.</i> , "Chromosomal assignment of 46 brain cDNAs," <i>Genomics</i> , 12:492-496, 1992.
C44	Ramsay, "DNA chips: state-of-the-art," <i>Nat. Biotech.</i> , 16:40-44, 1998.
C45	Reynolds and Weiss, "Clonal and population analyses demonstrate that an EGF-responsive mammalian embryonic CNS precursor is a stem cell," <i>Dev. Biol.</i> , 175:1-13, 1996.
C46	Reynolds and Weiss, "Generation of neurons and astrocytes from isolated cells of the adult mammalian central nervous system," <i>Science</i> , 255:1707-1710, 1992.
C47	Richards, Kilpatrick and Bartlett, "De novo generation of neuronal cells from the adult mouse brain," <i>Proc. Natl. Acad. Sci. USA</i> , 89:8591-8595, September 1992.
C48	Scheffler <i>et al.</i> , "Marrow-mindedness: a perspective on neurogenesis," <i>Trends Neurosci</i> , 22(8):348-357, 1999.
C49	Schena <i>et al.</i> , "Quantitative monitoring of gene expression patterns with a complementary DNA microarray," <i>Science</i> , 270:467-470, October 20, 1995.
C50	Schena <i>et al.</i> , "Microarrays: biotechnology's discovery platform for functional genomics," <i>Trends Biotech.</i> , 16:301-306, July 1998.
C51	Segel, "Biochemical Calculations" 2 <sup>nd</sup> Edition, John Wiley & Sons, New York, 1976.
C52	Shamblott <i>et al.</i> , "Derivation of pluripotent stem cells from cultured human primordial germ cells," <i>Proc. Natl. Acad. Sci. USA</i> , 95:13726-13731, November 1998.
C53	Smith <i>et al.</i> , "Comparison of biosequences," <i>Adv. Appl. Math.</i> , 2:482-489, 1981.
C54	Steindler <i>et al.</i> , "Boundary molecules during brain development, injury, and persistent neurogenesis - in vivo and in vitro studies," <i>Prog. Brain Res.</i> , 117:179-196, 1998.
C55	Steindler, Kadrie, Fillmore and Thomas, "The subependymal zone: 'brain marrow'," <i>Prog. Brain Res.</i> , 108:349-363, 1996.
C56	Stoykova and Gruss, "Roles of Pax-genes in developing and adult brain as suggested by expression patterns," <i>J. Neurosci.</i> , 14:1395-1412, March 1994.

<b>EXAMINER:</b>	<b>DATE CONSIDERED:</b>
EXAMINER: INITIAL IF A CITATION CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP 609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED. INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.	

<b>Form PTO-1449</b> U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office  <b>INFORMATION DISCLOSURE STATEMENT          BY APPLICANT</b>		<b>ATTORNEY DOCKET NO:</b> 6704-13US / BSK <b>APPLICATION NO:</b> 09/936,809 <b>APPLICANT:</b> Oleg N. Suslov, Dennis A. Steindler and Valery G. Kukekov <b>FILING DATE:</b> 01-16-02 <b>GROUP:</b> 1645
U.S. Patent Documents See Page 1	Foreign Patent Documents See Page 1	Other Art See Page 1
<b>OTHER ART (Including Author, Title, Date Pertinent Pages, Etc.)</b>		

C57	Suslov <i>et al.</i> , "RT-PCR amplification of mRNA from single brain neurospheres," <i>J. Neurosci. Methods</i> , 96(1):57-61, 2000.
C58	Thomas, Gates and Steindler, "Young neurons from the adult subependymal zone proliferate and migrate along an astrocyte, extracellular matrix-rich pathway," <i>GLIA</i> , 17:1-14, 1996.
C59	Thomson <i>et al.</i> , "Embryonic stem cells lines derived from human blastocysts," <i>Science</i> , 282:1145-1147, November 6, 1998.
C60	Van Gelder <i>et al.</i> , "Amplified RNA synthesized from limited quantities of heterogeneous cDNA," <i>Proc. Natl. Acad. Sci. USA</i> , 87:1663-1667, March 1990.
C61	Welford <i>et al.</i> , "Detection of differentially expressed genes in primary tumor tissues using representational differences analysis coupled to microarray hybridization," <i>Nucleic Acids Res.</i> , 26(12):3059-3065, 1998.
C62	Zeng <i>et al.</i> , "Differential cDNA cloning by enzymatic degrading subtraction (EDS)," <i>Nucleic Acids Res.</i> , 22(21):4381-4385, 1994.
C63	Arsenijevic and Weiss, "Insulin-like growth factor-I is a differentiation factor for postmitotic CNS stem cell-derived neuronal precursors: distinct actions from those of brain-derived neurotrophic factor," <i>J. Neurosci.</i> , 18(6):2118-2128, March 15, 1998.
C64	Bjornson <i>et al.</i> , "Turning brain into blood: a hematopoietic fate adopted by adult neural stem cells in vivo," <i>Science</i> , 283:534-537, January 22, 1999.
C65	Cameron and McKay, "Discussion point: Stem cells and neurogenesis in the adult brain," <i>Curr. Opin. In Neurobiol.</i> , 8:677-680, 1998.
C66	Suslov <i>et al.</i> , "RT-PCR amplification of mRNA from single brain neurospheres," <i>J. Neurosci. Methods</i> , 96:57-61, 2000.

<b>EXAMINER:</b>	<b>DATE CONSIDERED:</b>
EXAMINER: INITIAL IF A CITATION CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP 609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED. INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.	